CLAIMS

1. A method of keying, in a space presenting two spatial dimensions and one temporal dimension, a signal S measured in positions U subject to an uncertainty, from a set of N signals measured in determined positions, the N +1 signals having their temporal origin in a same plane, said method comprising the steps of

- re-sampling the N + 1 signals in order to place them all in an identical sampling range;

- filtering the signal S in order to place it in a range of frequencies that is identical to that of the N signals;

- defining for each position U associated with the measurements of the signal S a same neighbourhood of places V in the spatio-temporal space centred on the position U;

- producing a layered neural network RN^v for each location V in the neighbourhood of U, each network having an entry vector of dimension N associated with the measurements of the N signals and a scalar exit associated with a measurement of the signal S;

- for each neural network RN^v, defining a learning set such that the entries are the collection of all the vectors of measurements of the N signals situated at the locations V and the exits are the collection of the values of the signal S at the positions U for all the positions U;

- fixing a predetermined number of iterations Nit for all the neural networks and launching the learning phases of all the networks;

- for each neural network RN^v, calculating the value of the integral $\sum^v$ of the function giving the error committed by the network at each iteration, from iteration 1 to iteration Nit;

- for each surface spatial position V_k of the neighbourhood with coordinates (x_k, y_k, t_0), selecting in the time dimension the pair of locations $V1_k$ (x_k, y_k, t_1), $V2_k$(x_k, y_k, t_2), of the neighbourhood which correspond to the two smallest local minima of the two integrals ($\sum^{v1}{}_k$, $\sum^{v2}{}_k$);

- for each surface spatial position V_k of the neighbourhood, retaining from among the two positions $V1_k$ (x_k, y_k, t_1), $V2_k$(x_k, y_k, t_2) the position V_m, for which the signal estimated by the respective neural networks $RN^{v1}{}_k$ and $RN^{v2}{}_k$ presents a maximum variance; and

- choosing from among the positions V_m the position V_{cal} for which the integral $\sum^{v}{}_m$ is minimum.

2. The method according to claim 1, wherein the use of the neural networks comprises:

- defining for each position U associated with the measurements of the signal S a same neighbourhood of places V in the spatia-temporal space centred on the position U;

- producing a layered neural network RN^v for each location V in the neighbourhood of U. each network having an entry vector of dimension N x M associated with the measurements on a time window of size M centred on V of the N signals and a scalar exit associated with a value of the signal S;

- for each neural network, defining a learning set such that the entries are the collection of all the vectors of measurements taken in a time window of size M centred on V for the N signals and the exits are the collection of the values of the signal S at the positions U for all the positions U;

- fixing a predetermined number of iterations Nit for all the neural networks and launching the learning phases of all the networks;

- for each neural network RN^{v}, calculating the value of the integral $\sum^{v}$ of the function giving the error committed by the network at each iteration, from iteration 1 to iteration Nit;

- for each surface spatial position Vk of the neighbourhood with coordinates (x_k, y_k, t_0), selecting in the time dimension the pair of locations $V1_k$ (x_k, y_k, t_1), $V2_k$(x_k, y_k, t_2), of the neighbourhood which correspond to the two smallest local minima of the two integrals ($\sum^{v1}{}_k$, $\sum^{v2}{}_k$);

- for each surface spatial position V_k of the neighbourhood, retaining from among the two positions $V1_k$ (x_k, y_k, t_1), $V2_k$(x_k, y_k, t_2) the position V_m, for which the signal estimated by the respective neural networks $RN^{v1}{}_k$ and $RN^{v2}{}_k$ presents a maximum variance; and

- choosing from among the V_m positions the position Veal for which the integral $\sum^{v}{}_m$ is minimum.